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LESTER GERARD PACKINGHAM,

Petitioner,

v.

STATE OF NORTH CAROLINA,

Respondent.

On Writ Of Certiorari To The Supreme Court Of North Carolina

AMICUS CURIAE BRIEF OF ELECTRONIC FRONTIER FOUNDATION, PUBLIC KNOWLEDGE, AND CENTER FOR DEMOCRACY & TECHNOLOGY IN SUPPORT OF PETITIONER

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INTEREST OF AMICI CURIAE

Amici[1] the Electronic Frontier Foundation, the Center for Democracy & Technology, and Public Knowledge are nonprofit public interest organizations that work to protect civil liberties in the digital world. Amici advocate for individuals' constitutional rights to freedom of speech and privacy, and promote the public's interest in an open Internet that enables access to knowledge and provides opportunities for expression and democratic participation.

Amici have filed amicus briefs with this Court in numerous cases applying constitutional doctrine to emerging technologies. *See, e.g., Elonis v. United States*, 135 S. Ct. 2001 (2015); *Riley v. California*, 134 S. Ct. 2473 (2014); *Maryland v. King*, 133 S. Ct. 1958 (2013); *Brown v. Entertainment Merchants Association*, 564 U.S. 786 (2011).

SUMMARY OF ARGUMENT

Twenty years ago, this Court recognized the profoundly important role of Internet communication in fostering the free speech values at the very heart of the First Amendment. *Reno v. ACLU*, 521 U.S. 844 (1997). Even that long ago, *Reno* appreciated the enormous

[1] All parties have consented to the filing of this brief. Amici affirm that no counsel for any party authored this brief in whole or in part and that no person or entity made a monetary contribution specifically for the preparation or submission of this brief.

speech-enhancing potential of the new platform's "vast democratic forums," where:

> Through the use of chat rooms, any person with a phone line can become a town crier with a voice that resonates farther than it could from any soapbox. Through the use of Web pages, mail exploders, and newsgroups, the same individual can become a pamphleteer.

Id. at 851-52, 868-69.

The principles and values underlying the Court's decision remain as fundamental today as they were in 1997; the Internet remains "a never-ending worldwide conversation."[2] But the technology has changed dramatically: online social networking has become the platform where much of that conversation now takes place.

That new reality means that NCGS § 14-202.5, by barring a class of citizens (registered sex offenders) from accessing social networking services and other Internet content, bars those citizens from the collective communicative life of the nation. The First Amendment does not permit such a bar.

A. The statutory ban covers virtually the entirety of a vast communicative universe that hosts billions of active users and facilitates the exchange of billions of messages every day. The proscribed social

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[2] *ACLU v. Reno*, 929 F. Supp. 824, 883 (E.D. Pa. 1996), *aff'd*, 521 U.S. 844 (1997).

networking services are central to enabling myriad First Amendment-protected speech, including political speech, religious speech, and employment-related speech. NCGS § 14-202.5 thus cuts off a large class of people from an immense and important public dialogue.

B. Social networking services are the tip of the iceberg. The language of NCGS § 14-202.5, applied to the specific technologies underlying Internet communication, encompasses an even broader array of Internet resources and activities – such as purchasing a book at Amazon.com, researching a medical condition at WebMD.com, listening to music at Soundcloud.com, looking up basketball scores on ESPN.com, or reading any of the 70 million blogs at wordpress.com.

C. There is no clear relationship between the statutory prohibition and the harm that the state is attempting to prevent. The proffered policy objectives of the statute fall far short of justifying the remarkably broad swath of the Internet banned thereunder.

D. Economic theory further confirms that the statute fails to leave significant alternative channels of speech. Because of strong "network effects" in social networking systems, the small corner of the social networking universe that remains open to registered sex offenders does not provide meaningful alternative communicative opportunities.

ARGUMENT

The Statutory Prohibition at Issue Constitutes an Exceptionally Debilitating Burden on Speech in the Core of First Amendment Protection

The "first step" in First Amendment analysis "is to construe the challenged statute; it is impossible to determine whether a statute reaches too far without first knowing what the statute covers." *United States v. Stevens*, 559 U.S. 460, 474 (2010) (citation and internal quotation marks omitted). This is so regardless of the applicable level of scrutiny and the degree of "tailoring" required. Determination of the scope of statutory coverage includes the amount and kind of speech that is burdened. *See Virginia v. American Booksellers Ass'n*, 484 U.S. 383, 397 (1988).

Because the North Carolina statute expressly targets the use of "social networking" services, it is important to understand the way they operate and the role they play in contemporary communication.

A. The Proscribed Social Networking Services Host a Massive Quantity of Speech

The severity of the First Amendment burden imposed by the North Carolina statute is apparent from the sheer quantity of speech that the law bans. Statistics show that social networking services host an enormous quantity of speech today, speech totally inaccessible to those persons subject to the statute.

In 1997, this Court observed that "the content on the Internet is as diverse as human thought" at a time when the Internet had approximately 9.4 million host computers, 40 million users, and "thousands" of newsgroups where "100,000 new messages are posted each day." *Reno*, 521 U.S. at 851-52. Today, the numbers have grown to over 1 billion hosts, over 3.5 billion users, and over 216 billion e-mail messages sent every day.[3]

Technology has changed considerably in the intervening years. While *Reno* described "chat rooms" and "mail exploders" as the tools of online speech, *id.* at 851, today's online communities instead principally rely on a diverse array of "social networking" services that have emerged since *Reno* was decided. Such services are generally understood to be those Internet-accessible sites that allow individual users to maintain "profiles" with identifying information, to associate with other users, and to share information with others on the site.[4]

The volume of communicative activity taking place on social networking services every day is staggering – especially for such a new technology.[5] Nearly

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[3] *See* Internet Live Stats, *Emails sent in 1 second*, http://www.internetlivestats.com (total number of Internet users and websites); *id.* at http://bit.ly/1kzb4P3 (approximately 2.5 million e-mails sent every second). Unless otherwise specified, all URLs cited herein last accessed on Dec. 20, 2016.

[4] *See* danah boyd and Nicole Ellison, *Social Network Sites: Definition, History, and Scholarship*, 13 J. Computer-Mediated Commc'n 210, 211 (2008), http://bit.ly/1JJ6Gwm.

[5] Although the first social networking sites appeared online as early as 1997, social networking did not become a mainstream

7 in 10 American adults regularly use at least one Internet social networking service.[6] Facebook alone has more than 1.79 billion monthly active users who view more than 8 billion videos every day.[7] Twitter has over 310 million monthly active users, who publish more than 500 million "tweets" each day.[8] Instagram has over 600 million monthly users, who upload over 95 million photos every day.[9] Snapchat has over 100 million daily users who send and watch over 10 billion videos per day.[10] While some courts have permitted the exclusion of registered sex offenders from areas near playgrounds or schoolyards, those exclusions are highly limited to small areas with few people, so that the measure does not "virtually amount to banishment." *See Poe v. Snyder*, 834 F. Supp. 2d 721, 725 (W.D. Mich. 2011). Exclusion from social networking services would be tantamount to "banishment": the 2.14 billion

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technology until the appearance of Friendster, MySpace, and LinkedIn in 2002-03. *See id.*

[6] Shannon Greenwood et al., *Social Media Update 2016*, Pew Res. Ctr. (Nov. 11, 2016), http://pewrsr.ch/2fIeTTY.

[7] Facebook, *Company Info*, https://newsroom.fb.com/company-info/; Jessica Guynn, *Facebook Now Averages 8 Billion Daily Video Views*, USA Today (Nov. 4, 2015), http://usat.ly/2huc6St.

[8] Twitter, *Twitter Usage*, https://about.twitter.com/company; Internet Live Stats, *Twitter Usage Statistics*, http://www.internetlivestats.com/twitter-statistics/.

[9] Julia Boorstein, *Instagram Reaches 600 Million Monthly active users*, CNBC, Dec. 15, 2016, http://cnb.cx/2hWJez6; Dave Lee, *Instagram users top 500 million*, BBC (June 21, 2016), http://bbc.in/28Q8mXp.

[10] Sarah Frier, *Snapchat User 'Stories' Fuel 10 Billion Daily Video Views*, Bloomberg (Apr. 28, 2016), http://bloom.bg/2fB0J6Y.

users of such services are a population larger than six continents, let alone a playground.[11]

NCGS § 14-202.5 banishes registered sex offenders from virtually the entirety of this immense communicative universe. *Each* of the most heavily-used "social networking" sites on the Internet – including Internet giants such as Facebook, YouTube, Twitter, LinkedIn, Pinterest, Google+, Tumblr, Instagram, and Reddit – clearly falls within the statutory prohibition.[12]

Nor does this burden fall exclusively upon the registered sex offenders subject to the statutory ban. The nature of networked communication is such that excluding one category of speakers from the "vast democratic forums" of social networking deprives the *other participants* in those networks of the information, opinions, and other expression that those excluded speakers could provide. Exclusion impoverishes the networks themselves and the public debate occurring there.

This is particularly troubling as to matters of public concern on which registered sex offenders bring a unique perspective, such as sex offender law reform. For example, in 2015 there was a vigorous public

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[11] Statista, *Number of Social Media Users Worldwide from 2010 to 2020 (in billions)*, http://bit.ly/2gRTQQk (listing 2.14 billion social media users worldwide in 2015).

[12] *See* Appendix 1; *see also State v. Packingham*, 368 N.C. 380, 400 (2013) (Hudson, J., dissenting) (listing services).

debate about the wisdom of a measure, ultimately enacted, that would require that the passports of certain registered sex offenders visually and conspicuously display that status.[13] No doubt many people who followed this debate in social media would have wanted to hear the views of the people subjected to this law.

It is difficult to overstate the burden that the statutory exclusion imposes on registrants' ability to engage in a vast range of expressive activities, and the loss to expression that results.

B. Access to Social Networking Services Is Indispensable for Full Participation in the Nation's Communicative Life

The statistics above reveal only a small part of the story. From a First Amendment perspective, speech on social networking services is particularly important in numerous domains, a small sample of which is provided below.

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[13] *See, e.g.*, Editorial, *Do Sex Offenders Deserve a Scarlet Letter on Their Passport?*, L.A. Times (Feb. 3, 2016), http://lat.ms/1S3R21B; Lenore Skenazy, *Government Wants to Brand Sex Offenders on Their Passports*, Reason (Jan. 8, 2016), http://bit.ly/2hNb6qn; Christopher Moraff, *The long arm of sex offender laws – America's broken sex offender policy goes global*, Al Jazeera America (Feb. 8, 2016), http://bit.ly/2hxerfe; David Post, *The yellow star, the scarlet letter and "International Megan's Law,"* Wash. Post (Jan. 6, 2016), http://wapo.st/20JoSxJ; International Megan's Law to Prevent Child Exploitation and Other Sexual Crimes Through Advanced Notification of Traveling Sex Offenders, Pub. L. No. 114-119, 130 Stat. 15 (2016).

1. Social Movements and Organization

Political speech and activism are in "the core of the protection afforded by the First Amendment." *McIntyre v. Ohio Elections Comm'n*, 514 U.S. 334, 346 (1995). Social networking has become a vital tool for that activism, facilitating organization and participation in political and social movements today.

Many Americans first glimpsed the power of social networking to influence political events when, on December 17, 2010, Mohammed Bouazizi, a Tunisian vegetable merchant, set himself on fire to protest government repression.[14] It was an act of protest that under most circumstances would have gone unnoticed. Tunisia's traditional media outlets were tightly controlled by the government and, indeed, another Tunisian, Abdesslem Trimech, had gone all but unnoticed when he self-immolated in protest earlier that year.[15] But thanks in large measure to sophisticated use of social networking by other young Tunisian activists (and, later, by their counterparts elsewhere in the Middle East and North Africa), Bouazizi's protest sparked a series of political conflagrations known collectively as the Arab Spring that have profoundly affected the region.[16]

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[14] Yasmine Ryan, *How Tunisia's Revolution Began*, Al-Jazeera (Jan. 26, 2011), http://bit.ly/1klLAZu.

[15] *Id.*; John Pollock, *How Tunisian and Egyptian Youth Hijacked the Arab Spring*, MIT Technology Review (Aug. 23, 2011), http://bit.ly/2gVInkK.

[16] *Id.*; Rebecca J. Rosen, *So Was Facebook Responsible for the Arab Spring After All*, The Atlantic (Sept. 3, 2011), http://

In this country, too, online social networking has played an increasingly vital role in movements that are transforming our social and political landscape. Social networking activism began with the organization of protests at World Trade Organization meetings in Seattle in 1999.[17] The phenomenon accelerated in late 2008 as conservative activists from around the country coalesced over various social networking platforms to form the Tea Party movement.[18] Activists also used social networking tools to amplify the Occupy Wall Street movement from several hundred demonstrators in downtown Manhattan to events around the country, often broadcast over services like YouTube, Vimeo, and LiveStream.[19]

Social networking sites have also been a critical means for minority groups to bring attention to issues not adequately covered by traditional media. The Twitter device of a "hashtag" helped make the Black Lives

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theatln.tc/2hZBmgo; *see also* H. Khondker, *Role of the New Media in the Arab Spring*, 8 Globalizations 675 (2011) (discussing social networking's "critical role" in the Arab Spring, "especially in light of the absence of an open media and a civil society").

[17] N. Eltantawy and J.B. Wiest, *Social Media in the Egyptian Revolution: Reconsidering Resource Mobilization Theory*, 5 Int. J. of Commun. 1207, 1207-08 (2011), http://bit.ly/1fi7vZg.

[18] Douglas A. Blackmon et al., *Birth of a Movement*, Wall St. J. (Oct. 29, 2010), http://on.wsj.com/2hZCWio.

[19] Chenda Ngak, *Occupy Wall Street Uses Social Media to Spread Nationwide*, CBS News (Oct. 13, 2011), http://cbsn.ws/2gM2C0L.

Matter movement a national conversation on racial inequality.[20] Likewise, the Standing Rock Sioux used Twitter, Facebook, Instagram, and YouTube to galvanize national support for their protests against the Dakota Access Pipeline and its threat to their drinking water.[21]

Social networking is part of the lifeblood of these movements, and many thousands of others, large and small. Because users can instantaneously communicate with large, geographically diverse followings and because content can sometimes "go viral" and reach enormous audiences, social networking services have become "an effective organizational tool" for "rapid dissemination of political messages," gathering supporters, seeking financial support, and nurturing community cohesion.[22]

Cutting any person off from social networking services, as § 14-202.5 does, cuts that person off from this

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[20] *See* M. De Choudhury et al., *Social Media Participation in an Activist Movement*, presented at: 10th International AAAI Conference on Web and Social Media (May 17-20, 2016), Cologne, Germany, http://bit.ly/2hFHbjZ; Janell Ross, *How Black Lives Matter Moved from a Hashtag to a Real Political Force*, Wash. Post (Aug. 19, 2015), http://wapo.st/2hunNZu.

[21] Matt Petronzio, *How Young Native Americans Built and Sustained the #NoDAPL Movement*, Mashable (Dec. 7, 2016), http://on.mash.to/2gVQi1q.

[22] Archon Fung et al., *Six Models for the Internet + Politics*, 15 Int'l Stud. Rev. 30 (2013); Karine Nahon and Jeff Helmsley, Going Viral 16 (2013).

array of sociopolitical activism. That is a substantial blow to the person's expressive opportunities.

2. Political Campaigns

In the sphere of electoral politics, the impact of social networking has been equally dramatic. The 2008 presidential campaign of Barack Obama brought social networking into the forefront of politics for the first time.[23] Social networking was even more prominent in the 2016 election cycle. Each of the four presidential candidates who received more than 1% of the popular vote had an extensive presence on social networking sites.[24] The eventual victor, President-Elect Donald Trump, was able to gain unprecedented

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[23] *See* David Carr, *How Obama Tapped Into Social Networks' Power*, N.Y. Times (Nov. 9, 2008), http://nyti.ms/1bI439M; Bethany A. Conway et al., *The Rise of Twitter in the Political Campaign: Searching for the Intermedia Agenda-Setting Effects in the Presidential Primary*, 20 J. Computer-Mediated Comm. 363 (2015).

[24] RealClearPolitics, *General Election: Trump vs. Clinton vs. Johnson vs. Stein*, http://bit.ly/2942mJn; Donald J. Trump for President, donaldjtrump.com (linking to campaign Twitter, Facebook, Instagram, and YouTube accounts); Hillary for America, https://www.hillaryclinton.com/ (linking to campaign Facebook, Twitter, Instagram, LinkedIn, Pinterest, YouTube, and Medium accounts); Johnson Weld 2016, https://www.johnsonweld.com/ (linking to campaign Facebook, Twitter, YouTube, Instagram, Google+, LinkedIn, and Pinterest accounts); Jill Stein for President, http://www.jill2016.com/ (linking to campaign Facebook, Twitter, YouTube, and Instagram accounts).

penetration into the electorate through his use of Twitter alone.[25]

Ideas on social networking systems had real effects. More Americans reported relying on social networking for news about the political campaigns, compared to many traditional media sources and candidates' websites, and a plurality of Americans aged 18-29 found social media to be the "most helpful" news source.[26] Social networking not only informed Americans, but also influenced their views: 20% of users reported "modify[ing] their stance on a social or political issue because of material they saw on social media, and 17% say social media has helped to change their views about a specific political candidate."[27]

But more than simply providing a megaphone for candidates, social networking – unlike more traditional media (*e.g.*, print, TV, and radio) – enables a uniquely *interactive*[28] form of communication between voters and candidates, giving the public unprecedented personal access to candidates. In 2007, a presidential debate featured questions asked directly by

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[25] Michael Barbaro, *Pithy, Mean, and Powerful: How Donald Trump Mastered Twitter for 2016*, N.Y. Times (Oct. 5, 2015).

[26] Jeffrey Gottfried et al., *The 2016 Presidential Campaign – a News Event That's Hard to Miss*, Pew Res. Ctr. (Feb. 9, 2016), http://pewrsr.ch/1PAZeEp.

[27] Monica Anderson, *Social Media Causes Some Users to Rethink Their Views on an Issue*, Pew Res. Ctr., FactTank (Nov. 7, 2016), http://pewrsr.ch/2eeWn9t.

[28] John A. Bargh and Katelyn Y.A. McKenna, *The Internet and Social Life*, 55 Annual Review of Psychology 573, 577 (2004).

members of the public via YouTube.[29] By 2016, the role of social networking in political debates had evolved from a novelty to a fully integrated part of the process. Social networking services provided questions to debate moderators, real-time voter reactions during the debates, and data to analyze how voters were affected.[30]

Social networking sites also have lowered the barriers to running for office and increased engagement by voters, including those otherwise left outside the political process. First-time candidates, running without the traditional advantages of incumbency, were able to use social networking to compensate. New research shows that this strategy was successful: new politicians who used Twitter received an outsized boost in donations, especially from citizens who had not donated to politicians before and from those living in areas with low newspaper circulation.[31] The popular site Reddit has also offered the public opportunities to interact with elected officials and candidates for office at

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[29] Katharine Q. Seelye, *New Presidential Debate Site? Clearly YouTube*, N.Y. Times (June 13, 2007), http://nyti.ms/2hKev9T

[30] Commission on Presidential Debates, *Commission on Presidential Debates Announces Social Media, Technology and Voter Education Initiatives* (Sept. 14, 2016) http://bit.ly/2cyqLaZ; David McCabe, *Facebook Will Help Gather Questions for Presidential Debate*, The Hill (Sept. 15, 2016), http://bit.ly/2cpOl8H.

[31] Maria Petrova et al., *Social Media and Political Donations: New Technology and Incumbency Advantage in the United States* 14, 18-19, 22-23 (Working Paper Sept. 8, 2016), https://ssrn.com/abstract=2836323.

all levels, and from across the ideological spectrum, in the site's "Ask Me Anything" forums.[32]

To some people, the content of election speech on social networks has been defensible; to others it has been reprehensible. But without a doubt, that speech was influential. Blocking some people from accessing those networks deprives them of important parts of the marketplace of ideas.

3. Communicating with Government

Social networking has also become a crucial tool for governing. The White House communicates over Facebook, Twitter, YouTube, Google+, Flickr, Slideshare, LinkedIn, Scribd and FourSquare.[33] Governors in all 50 states have Twitter accounts.[34] All 100 members of the U.S. Senate and 434 voting members of the

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[32] *See, e.g.*, Ken Yeung, *Trump Versus Clinton: A Tale of Two Different AMAs*, VentureBeat (Aug. 1, 2016), http://bit.ly/2aNoAQk; Gina Cole, *Seattle City Council Candidates Answer Questions in Reddit 'Ask Me Anything' sessions*, Seattle Times (Oct. 6, 2015) http://bit.ly/2hXPc72; Joe Coscarelli, *Zephyr Teachout on Reddit, Wanting to Be Governor, and Her Running Mate, Tim Wu*, N.Y. Magazine (Aug. 23, 2014), http://nym.ag/2h1DgAV.

[33] The White House, *Social Hub*, https://www.whitehouse.gov/engage/social-hub.

[34] Twitter, *US Governors*, https://twitter.com/gov/lists/us-governors/members?lang=en (providing public list by Twitter Government, containing 49 out of 50 governors, but excluding North Dakota Governor Jack Dalrymple). Gov. Dalrymple's twitter account is available at https://twitter.com/DalrympleforGov?lang=en.

U.S. House of Representatives from the 114th Congress have Twitter accounts.[35] A recent survey of Congressional staffers found that Twitter and Facebook are effective ways for constituents to bring issues to their representatives' attention and to influence their positions.[36]

Americans increasingly rely on social networks for information from government during times of national emergency.[37] The U.S. Department of Homeland Security ("DHS") has had a "Virtual Social Media Working Group" since 2010 and maintains an active presence on all of the major social networking platforms.[38] It uses these platforms to exchange information with the public during national crises. During Hurricane Sandy,

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[35] Twitter, *Members of Congress*, https://twitter.com/cspan/lists/members-of-congress/members?lang=en. (providing public list by C-Span) (only Rep. Sam Farr not listed). Rep. Farr has a Google+ account. https://plus.google.com/+RepSamFarr.

[36] Bradford Fitch and Kathy Goldschmidt, Congressional Management Foundation, *#SocialCongress 2015*, at 12-15 (2015), http://bit.ly/1K8My03.

[37] Fully one-quarter of all Americans (and over half of those under the age of 30) reported receiving information about the 2013 Boston Marathon Bombing via social networking sites. *See* Social Media Working Group Act of 2015, Report of the Committee on Homeland Security and Governmental Affairs, 114 S. Rpt. 145, at 2 (Sept. 21, 2015), http://bit.ly/2gZVFt8.

[38] *See* the DHS "Social Media Directory," at https://www.dhs.gov/social-media-directory, and the DHS pages on Twitter (https://twitter.com/dhsgov), Facebook (https://www.facebook.com/homelandsecurity), Instagram (https://www.dhs.gov/instagram), and Flickr (https://www.dhs.gov/flickr). *See generally* Dina Fine Maron, *How Social Media Is Changing Disaster Response*, Scientific American (June 7, 2013), http://bit.ly/2gQCzp7.

for example, DHS received approximately 20 million Twitter messages and sent messages to more than 300,000 Facebook users and 6 million Twitter users.[39] Members of the public communicate over Instagram with the Transportation Security Administration concerning whether certain items may be carried onto planes.[40] The Centers for Disease Control educates the public on health issues using social media tools, including Facebook, Twitter, YouTube, and Instagram.[41] Emergency management agencies in all 50 states also provide information to the public over Twitter.[42]

Government agencies and officials in North Carolina also rely on social networking sites. Every statewide-elected official, and 167 out of 170 state legislators have Facebook, Twitter, and/or YouTube accounts.[43] The City of Durham, Mr. Packingham's home town, also uses a wide variety of social networking tools, including Facebook, Twitter, YouTube, Flickr, and

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[39] U.S. Dep't of Homeland Sec., *Lessons Learned: Social Media And Hurricane Sandy* (2013), http://bit.ly/2huLsZO; *see also* Sarah Estes Cohen, *Sandy Marked a Shift for Social Media Use in Disasters*, Emergency Mgmt. (Mar. 7, 2013), http://bit.ly/1zvKugc.

[40] *See* Lori Aratani, *TSA Instagram Showcases the Wacky and Weird from Airport Checkpoints*, Wash. Post (Nov. 27, 2016), http://bit.ly/2gMj4OQ.

[41] Centers for Disease Control, *Social Media at CDC*, https://www.cdc.gov/socialmedia/.

[42] Twitter, *State EM Offices*, https://twitter.com/fema/lists/state-em-offices/members?lang=en (providing public list of State Emergency Management agency Twitter accounts by FEMA).

[43] Vote NC, *Current North Carolina Elected Representatives* http://vote-nc.org/Officials.aspx?State=NC&Report=NC.

Instagram.[44] For example, the Durham Police Department provides "alerts and crime prevention and education information" over Facebook and Twitter. The Durham Finance Department uses Twitter to publicize "new bid opportunities." And GoDurham, the city's public transit system, announces scheduling updates and detours via Facebook and Twitter.

Those subject to NCGS § 14-202.5, like Mr. Packingham, cannot access any of those resources – on pain of a felony conviction – to reach elected officials, to find emergency services, to learn about local meetings with officers, to bid on city projects, or even to find out if the bus is running on time.

4. Religious Worship and Fellowship

As Mr. Packingham himself discovered, social networking sites offer new forums to share and practice religious faith.[45] According to the Pew Research Center: "Fully 20% of Americans said they had shared their religious faith on social networking websites or apps (such as Facebook and Twitter) in the past week,

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[44] City of Durham, *Social Media*, http://bit.ly/1IqdXK9.

[45] The Facebook posting that led to Mr. Packingham's arrest read:

> "Man God is Good! How about I got so much favor they dismiss the ticket before court even started. No fine, No court costs, no nothing spent. . . . Praise be to GOD, WOW! Thanks JESUS!"

J.A. 136 (ellipsis in original).

and 46% said they had seen someone else share 'something about their religious faith online.'"[46] Online religious discourse is especially popular among young adults.[47]

Religious congregations and leaders increasingly embrace social media. Pope Francis signed up for Instagram this year, accrued over 1 million followers within 12 hours, and now has 3.4 million followers.[48] An additional 27 million follow his daily Twitter messages.[49] The Dalai Lama has published over 1,200 messages to his 13 million Twitter followers.[50] Islamic scholars also reach out via social media, including Suhaib Webb, an imam whose popular 10-second Snapchat videos address "a wide range of topics from drugs to marriage advice" in an effort to reach young Muslims.[51] The Church of Jesus Christ of Latter-Day Saints uses Facebook, YouTube, and Twitter to reach millions

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[46] Pew Research Center, *Religion and Electronic Media* 1 (Nov. 6, 2014), http://pewrsr.ch/1tPEmyx.

[47] *See* Paul K. McClure, *Faith and Facebook in a Pluralistic Age: The Effects of Social Networking Sites on the Religious Belief of Emerging Adults*, Sociological Perspectives 14 (2016).

[48] Kelsey Dallas, *The Promise of Social Media for Religious Communities*, Deseret News (June 4, 2016), http://bit.ly/2gMh4pA.

[49] *Pope Francis' Followers on Twitter Now Exceed 27 Million*, Vatican Radio (Feb. 18, 2016), http://bit.ly/2gMhn3I.

[50] Dalai Lama, @DalaiLama, https://twitter.com/dalailama.

[51] Zaina Salem, *The Religion of Social Media: When Islam Meets the Web*, The Islamic Monthly (May 16, 2016), http://bit.ly/2huPPDR.

of people, and the church encourages members to proselytize and to engage with each other on social media platforms.[52]

Perhaps most poignantly, congregations use social networking sites to provide spiritual and financial support to those in need. For example, after the June 2016 mass shooting at Pulse nightclub in Orlando, several central Florida churches reached out over social networking sites to offer aid and comfort to the families of the victims, including free funeral services that could be streamed over the Internet to mourners who could not attend.[53]

Research shows that people who engage in "online religious forums" feel more connected to coreligionists, and, as a result, experience "a greater sense of purpose in their own lives and . . . greater trust and faith in others."[54] The North Carolina law denies an entire class of speakers the opportunity to use this unique environment to shape their own religious worldview, to offer and receive from others the benefit of their personal and religious experience, and to achieve that "greater sense of purpose."

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[52] Tad Walch, *How LDS missionaries are using social media to reach an evolving audience*, Deseret News (Apr. 2, 2015), http://bit.ly/2gWj5Tr.

[53] Bethany Rodgers, *Churches Willing to Hold Free Funeral Services for Shooting Victims*, Orlando Sentinel (June 14, 2016), http://bit.ly/2h00XoE.

[54] Katelyn Y.A. McKenna and Kelly J. West, *Give Me That Online-Time religion: The Role of the Internet in Spiritual Life*, 23 Computers in Human Behavior 942, 953 (2007).

5. Employment

Social networking permeates virtually every aspect of the working lives of millions of Americans, from finding a job, to connecting with colleagues and customers, to locating resources necessary for job performance.

Of the 7 out of 10 Americans who use social networking services, 35% used those services to look for a job, 34% used them to inform friends about available jobs, 21% applied for a job found through social networking, and 13% used them to post information that helped them get a job.[55] The professional social networking site LinkedIn has 467 million members,[56] and is the eleventh most visited website in the United States.[57]

Job performance increasingly depends on access to social networking resources. Today's workers incorporate social networking into a wide range of activities, from building and strengthening relationships with coworkers, to obtaining work-related information from

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[55] Aaron Smith, *Searching for Work in the Digital Era, Part 2: Job Seeking in the Era of Smartphones and Social Media*, Pew Res. Ctr. (Nov. 19, 2015), http://pewrsr.ch/2hnnDjz.

[56] Ian Mills, *4 Reasons You Need to Be on LinkedIn*, Huffington Post (Nov. 21, 2016), http://huff.to/2gWxe4M.

[57] Alexa, *Top Sites in United States*, http://www.alexa.com/topsites/countries/US.

professional colleagues working elsewhere, to contacting experts in their fields for advice and counsel.[58] On Twitter alone there are thousands of different weekly or monthly "chats," at which high school athletic directors, arborists, event planners, software engineers, and nurse practitioners among countless others from around the globe can gather to discuss issues arising in their daily work.[59] Sites like Monster.com, Beyond.com and AngelList.com serve the professional networking needs of workers across diverse industries and job categories.[60] Other, more specialized social networking sites bring together focused groups such as physicians, information technology professionals, education professionals, military personnel, and scientific researchers.[61]

People banned from social networking simply cannot adequately perform many jobs in the 21st century

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[58] *See* Kenneth Olmstead, Cliff Lampe and Nicole B. Ellison, *Social Media and the Workplace*, Pew Res. Ctr. (June 22, 2016), http://pewrsr.ch/28OB2Qt.

[59] *See* TweetReports, *Twitter Chat Schedule*, http://tweetreports.com/twitter-chat-schedule/ (#ADChatsHS, @CaseSports, #TreeChat, @Coronatools, #EventProfs, @readytospark, #UtestChat, @utest, #ARPN, @pyramidmedicine). *See generally Education Chats*, http://bit.ly/1x3luPT (listing hundreds of education-related Twitter chats).

[60] *See* Alex Konrad, *AngelList Acquires Popular Tech Discovery Site Product Hunt to Go After Startup Jobs Search*, Forbes (Dec. 1, 2016), http://bit.ly/2gWBuiV; Monster, "About Us," https://www.monster.com/about/; Beyond, The Career Network, http://www.beyond.com.

[61] Hannah Kuchler, *Vertical Dimensions to Social Networking*, Financial Times (Oct. 30, 2014), http://on.ft.com/2gWICOb.

economy. Most obviously, jobs at social networking service providers are off-limits if they require any contact with the company's website. Moreover, many thousands of businesses use online social networks for marketing, collaboration among employees, managing procurement, and receiving customer queries and complaints.[62] The packaged goods, financial services, professional services, and advanced manufacturing sectors alone may enjoy an estimated $900 billion to $1.3 trillion in value "through use of social technologies."[63] With such overwhelming financial incentives to integrate social networking pervasively into industry, the number, variety, and quality of jobs available to people excluded from social networking sites is likely to decrease.

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These examples could be multiplied without end. There are few areas of modern life in which social networking services do not occupy an increasingly necessary position. It is difficult to imagine full and robust participation in the civic life of this country without access to the tools these services provide.

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[62] Michael Chui et al., *The Social Economy: Unlocking Value and Productivity Through Social Technologies*, McKinsey Global Institute 2-4 (July 2012), http://www.mckinsey.com/industries/high-tech/our-insights/the-social-economy.

[63] *Id.* at 3, 9.

C. The Statutory Prohibition Reaches Many Internet Sites Outside of the "Social Networking" Category

A prohibition on accessing just the major social networking sites would itself be severely damaging to expressive activities, but the statutory prohibition at issue here sweeps much more broadly.

As the dissent below correctly observed, in addition to sites like Facebook, Google+, LinkedIn, Instagram, and Reddit:

> [T]he statute also likely includes sites like Foodnetwork.com, and even news sites like the websites for The New York Times and North Carolina's own News & Observer. Most strikingly, the statute may even bar all registered offenders from visiting the sites of Internet giants like Amazon and Google.

Packingham, 368 N.C. at 400 (Hudson, J.).

Three features of the statutory language are especially important to an understanding of the ban's breadth.

1. The Criteria for Prohibited Sites

The statute prohibits access to websites that provide certain basic social networking functionality, even if the site's content and services are far outside the scope of those web sites that are commonly thought of as "social networking web sites."

Spurred on by the success of the major social networking sites described above, many Internet websites, offering a diverse array of information, services, or goods for sale across the entire spectrum of the Internet economy, offer social networking tools to attract and retain users and to create a sense of community among them. For example, many commercial websites allow users to post reviews of products or services, to post queries about website offerings, and to respond to other users' ratings and queries.[64] Indeed, any commercial website[65] that allows access to minors and permits users to post comments under their own name or nickname[66] that other users may see and respond to[67] in order to exchange information about an article, product, or service,[68] could fall within the statutory ambit.

Although popular social networking sites may permit users to create more detailed profiles or provide more sophisticated communication mechanisms, the

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[64] *See, e.g.*, Amazon, Amazon.com Community Guidelines, http://amzn.to/2dpw6DK ("The Amazon Community provides various forums for engaging other users and sharing authentic feedback about products and services – positive or negative.").

[65] NCGS § 14-202.5(b)(1) ("derives revenue from . . . sources related to the operation of the Web site").

[66] NCGS § 14-202.5(b)(3) ("Allows users to create . . . personal profiles that contain information such as the name or nickname of the user").

[67] NCGS § 14-202.5(b)(2) (facilitates "social introduction" or "information exchanges" between two or more people).

[68] NCGS § 14-202.5(b)(4) ("Provides users . . . mechanisms to communicate with other users, such as a message board").

ability to exchange information with other users on a website using one's name, nickname, photograph, or other personal information constitutes a minimal level of "social networking capabilities" that may bring many commercial sites within the sweep of NCGS § 14-202.5.[69]

For example, the Disqus system for accepting and publishing comments is used on millions of websites, ranging from top news outlets like *Politico* and *The Atlantic*, to personal journals like that of two retail fanatics, CostcoCouple.com.[70] Any website using that comment system might well be a prohibited site under NCGS § 14-202.5.[71]

As a result, the statutory access prohibition covers websites which are not ordinarily considered to be engaged in "social networking." A representative sampling of such sites – each of which appears to meet the

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[69] This definition of "social networking capabilities" is applied in Appendix 1.

[70] Disqus, *Disqus Directory*, http://bit.ly/2i7YVHT (providing partial listing of sites that have used Disqus' comment tool); Adriana Lee, *Disqus' Daniel Ha: Writing the Future of Comments*, ReadWrite (Nov. 25, 2013), http://bit.ly/2gQGP8k.

[71] Disqus permits websites to earn revenue from advertising via the comment system, *see* Anna Heim, *Disqus Serves 5 Billion Ads Per Month, Keeps on Expanding Promoted Discovery*, The Next Web (Dec. 19, 2012), http://bit.ly/2h0Pdp8; facilitates introduction of people via features for "following" individual users, *see* Jason Kincaid, *Now You Can Follow Other Commenters on Disqus*, TechCrunch (Dec. 16, 2010), http://tcrn.ch/2hhd7dI; provides for creation of personal profiles, *see id.*; and, by definition, offers mechanisms for users to communicate with other users.

statutory definition of a prohibited "commercial social networking Web site," *see* Appendix 2 – would include:

Search engines: Google, Bing, Yahoo

News and Opinion: Raleigh News and Observer, New York Times, Washington Post, Slate

Politics: Politico, Fox News, The Atlantic

Sports: Yahoo Sports, ESPN, Bleacher Report

Blogs: Wordpress, Quora, Blogspot, Blogger

Retailers: Amazon, Walmart, Target, Macy's

Music: Pandora, Soundcloud, Rolling Stone

Health: WebMD

Travel: TripAdvisor

2. The Prohibition on "Access"

It is a felony for a registered sex offender to "access," for *any purpose whatsoever*, any website that falls within the statutory ban. That is, if a website falls into the category of access-prohibited sites, any access *to the site* – *e.g.*, reading or downloading any documents posted there, triggers criminal penalties. This is true whether or not the social networking functions were accessed or used (let alone used for any improper purpose).

As a consequence, shopping for a gift on a Macy's wedding registry, perusing hotel reviews on TripAdvisor, or filling out a March Madness bracket on Yahoo Sports, may all be prohibited.

Furthermore, Internet technology allows for one web page to "embed" another web page, such that a user accessing the first web page automatically accesses the second. Website operators regularly embed social networking services' features into their own web pages.[72] This possibility of embedding means that the statute may prohibit accessing a website that otherwise might not fall within the statutory prohibition.

3. Application to "Web Sites" Generally

The North Carolina statutory scheme prohibits access to "Internet Web site[s]" that meet the requirements set forth in § 14-202.5(b). "Web site," however, is not expressly defined. Its ordinary meaning,[73] at least in this context, is not sufficiently precise[74] to enable

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[72] *See, e.g.*, Mat Honan, *Embedded Posts: This Is Facebook's Real Public Offering*, WIRED (July 31, 2013), http://bit.ly/2hhg9Pc.

[73] The American Heritage Dictionary defines "website" as a "set of interconnected webpages, usually including a homepage, generally located on the same server, and prepared and maintained as a collection of information by a person, group, or organization." "Website," American Heritage Dictionary http://bit.ly/2h9Z7oy (Dec. 20, 2016).

[74] Statutes impinging on core First Amendment interests through the imposition of criminal penalties must satisfy a particularly high standard of precision. *See FCC v. Fox Television Stations, Inc.*, 132 S. Ct. 2307, 2309-10 (2012).

those subject to the prohibition to conform their behavior to the statutory norm, because the boundaries *between* "Web sites" are not certain. Specifically, two questions arise: first, whether multiple services run by a single entity constitute a single "Web site"; and second, whether all content maintained by a hosting service is a single "Web site."

1. Often a single Internet company will operate multiple, independent services. Google, for example, offers a search service at www.google.com, an e-mail service at mail.google.com, a translation service at translate.google.com/, a "news aggregator" at news.google.com, a scholarly research tool at scholar.google.com, a shopping site at www.google.com/shopping, and a photo storage service at photos.google.com.

Under a reasonable reading of the statutory language, this entire collection of interconnected web pages constitutes the singular "Google Web site." And because some of the services offered at the "Google Web site" – Google+, for instance – provide social networking functionality and permit minors to become members,[75] it is possible that the *entire collection of services* offered at the "Google Web site" is off-limits to registered sex offenders. Notably, this population would lose access to some of the most popular e-mail platforms on the Internet because they are integrated into larger

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[75] Google, *Get Started with the New Google+*, http://bit.ly/1OAKth3 (describing social networking functions); Google, *Accounts Help*, http://bit.ly/1rqpW7W (Google permits users 13 years and older to have accounts).

suites of online services from Google, Microsoft, or Yahoo.

2. When a single hosting service includes some web pages that have social networking functionality and others that do not, the definitional problem with "Web site" extends even further. Wordpress, for example, is one of the largest blogging platforms on the Internet, allowing users to create their own web pages and blogs, all served under the domain name "wordpress.com." Wordpress serves over 74 million different pages, some of which include "social networking" functionality and some of which do not.[76]

Since all of these websites have an address within "wordpress.com," § 14-202.5 may treat them all as within this one "Web site." This would potentially proscribe content far outside any reasonable statutory intent. One group, for example, created a Wordpress blog solely to publish an open letter to a U.S. senator.[77] The blog contains only one page, with nothing but political advocacy on it, and yet that blog may be considered part of a forbidden "commercial social networking service."

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[76] ManageWP, *14 Surprising Statistics About WordPress Usage*, http://bit.ly/MaYMzp. (Feb. 7, 2014).

[77] Alan Krueger et al., *An Open Letter from Past CEA Chairs to Senator Sanders and Professor Gerald Friedman*, WordPress, https://lettertosanders.wordpress.com/ (Feb. 17, 2016).

D. The Statute Is Not Well Tailored to Address the Problem to Which It Is Directed

The broad range of expression blocked by § 14-202.5 suggests that the statute is not properly tailored to the relevant problem. North Carolina asserts that the statutory prohibition serves the purpose of "prevent[ing] registered sex offenders from prowling on social media and gathering information about potential child targets." *Packingham*, 368 N.C. at 388.

It goes without saying that protecting minors against those who would perpetrate sexual violence against them is a compelling government interest of paramount importance. But prohibiting access to all social networking because some individuals could possibly obtain information that could then be used to perpetrate criminal acts surely "burns down the house to roast the pig." *Reno*, 521 U.S. at 882.

In *Reno*, faced with a ban on posting sexually explicit content on the Internet, the Court noted that while such content was "widely available," users "seldom encounter such material accidentally," because "[u]nlike communications received by radio or television, the receipt of information on the Internet requires a series of affirmative steps more deliberate and directed than merely turning a dial." *Id.* at 854. Similarly, social networking services are not designed to make it easy for sex offenders to discover minors. Indeed, many of those services implement privacy options and safeguards that reduce the likelihood of

undesirable encounters with minors.[78] *Cf. Reno*, 521 U.S. at 854-55 (emphasizing the "[s]ystems [that] have been developed to help parents control the material that may be available on a home computer with Internet access").

A determined criminal might be able to find ways to take advantage of social networking services to inappropriate ends, but the proper recourse to prevent undesirable conduct is to prohibit the conduct that is undesirable – without prohibiting expressive activity protected by the First Amendment. In *Schneider v. State*, the Court rejected municipal regulations prohibiting the distribution of flyers without a license because the regulations were not narrowly tailored to further the government's interest in preventing

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[78] *See, e.g.*, Facebook, *Profile & Timeline Privacy*, http://bit.ly/2hYbIwz; Facebook, *Control Who Can See What You Share*, http://bit.ly/2i5Gboe. These privacy features are common among traditional social networking sites. *See, e.g.*, Instagram, Privacy Settings and Information, http://bit.ly/2hRUpdE (Instagram privacy settings allowing users to limit who can see their photos and videos, who can comment on their posts, and who can see their profile); Instagram, How Do I block or Unblock Someone, http://bit.ly/2hpt7dL; *see also* Twitter, About Public and Protected Tweets, http://bit.ly/1ht6UCO (Twitter privacy setting allowing users to limit who can view their tweets and providing instructions for blocking other account holders); *see also* Google+, Settings, http://bit.ly/1ktHEDc (Google+ privacy settings allowing users to limit who can see posts, who can comment on posts, and who can send notifications); *see also* Google+, Block Someone – Google+ Help, https://support.google.com/plus/answer/1047934?hl=en (describing how to stop other account holders from contacting you or viewing your content).

littering. 308 U.S. 147, 162 (1939). The ordinances unreasonably restricted speech, punishing distributors of flyers even where the distributors did not, themselves, litter. *Id.* As the Court aptly noted, "[t]here are obvious methods of preventing littering. Amongst these is the punishment of those who actually throw papers on the streets." *Id.*

Likewise, *McCullen v. Coakley* struck down a Massachusetts law criminalizing standing in a public walkway within 35 feet of abortion facilities because the law was not narrowly tailored to serve the government's interest in combating obstruction of abortion clinics. 134 S. Ct. 2518, 2541 (2014). Though Massachusetts asserted "undeniably significant interests in maintaining public safety on those same streets and sidewalks, as well as in preserving access to adjacent healthcare facilities," banning access to public walkways was an "extreme step" that closed substantial portions of public forums to all speakers. *Id.* Massachusetts failed to use "less intrusive tools" or "consider[] different methods that other jurisdictions have found effective," including anti-harassment and anti-obstruction statutes that would more directly address the state's interests without severely restricting speech. *Id.* at 2539.

But the laws challenged in *McCullen* and *Schneider* seem narrowly tailored when compared to § 14-202.5, which goes far beyond protecting minors from sexual violence. North Carolina's prohibition broadly bans online speech and access to critical websites with no regard for whether that speech, or the activities

conducted on those websites, endanger or even involve minors. The practical effect is to bar registered sex offenders not merely from the school, the playground, and even the town square, but from entire regions of the country where their fellow citizens are gathered for the purpose of information exchange about any and all subjects of human inquiry.

Nor are the statutory exceptions well-tailored to the statutory goals. The statute provides that a website falls outside the access prohibition if it:

> (1) Provides only one of the following discrete services: photo-sharing, electronic mail, instant messenger, or chat room or message board platform; or
>
> (2) Has as its primary purpose the facilitation of commercial transactions involving goods or services between its members or visitors.

NCGS § 14-202.5(c).

It is unclear why a site that provides only "chat room" or "message board" functionality, or a site whose primary purpose is facilitation of commercial transactions between members, poses any less risk of information "harvesting" than other sites. In addition, websites that provide single discrete services have generally given way to the popular integrated suites of services provided by Google, Microsoft, Amazon, Facebook, and Yahoo!, among others.[79] This increasingly

[79] *See* Appendix 1.

integrated functionality also makes the "primary purpose" requirement of the second exception too vague to permit criminal liability. A person subject to the statute should not have to risk a felony conviction based upon a "guess" of the primary purpose of a site such as eBay, let alone one such as Amazon or Google. *FCC v. Fox Television Stations, Inc.*, 132 S. Ct. 2307, 2317 (2012). The combination of the law's vagueness and its grave sanction could have such a chilling effect as to effectively exclude subject persons from the Internet altogether.

E. Alternative Channels Cannot Replace the Power of the Services to Which the Statute Bars Access

The court below asserted that "the Web offers numerous alternatives that provide the same or similar services" as prohibited sites.[80] That assertion dramatically understates the communicative burdens imposed by the statutory prohibition.

To be sure, there may be social networking websites that fall outside of the statute's reach, either because they are entirely non-commercial or because their terms of service prohibit minors from accessing the site. But this category of access-permitted sites

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[80] *Packingham*, 368 N.C. at 390. The court identified four such sites: the Paula Deen Network (http://www.pauladeen.com), the news and opinion website at WRAL.com, the employment site at Glassdoor.com, and the photo-sharing site at shutterfly.com.

includes *none* of the largest and most widely used social networking sites.[81] And for social networking, size matters: owing to well-known "network effects," smaller social networking sites are not meaningful alternatives to larger sites, even if they provide technically equivalent functionality.

A "network effect" is an economic phenomenon in which a good or service becomes more valuable as more people use it. A telephone or fax network is the classic example; as more people join, the network becomes increasingly valuable to each user.[82] By one commonly used measure, the value of a network varies roughly in proportion to the *square* of the number of users; a system that is smaller than another by tenfold is about 100 times less valuable, and one that is a thousand times smaller is diminished in value by a factor of a million.[83]

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[81] *See* Appendix 1.

[82] *See* Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. Econ. Persp. 93, 96 (1994); David G. Post, *In Search of Jefferson's Moose: Notes on the State of Cyberspace*, 47-59 (2009) (comparing Internet network effects to development of early U.S. canal transport systems).

[83] This is known as Metcalfe's Law. *See* George Gilder, *Metcalfe's Law and Legacy*, Forbes ASAP (Sept. 13, 1993), at S158; Xing-Zhou Zhang et al., *Tencent and Facebook Data Validate Metcalfe's Law*, 30 J. Computer Sci. & Tech. 246 (2015). Intuitively, the explanation of the law is that the value that one derives from a networked system is proportional to the number of conversations on the system, and in a system of n users there can be n^2 conversations.

Social networking services, unsurprisingly, exhibit strong network effects. Because those services enable users to communicate with other users, they rapidly increase in usefulness as more people join.[84] New users choosing between two services will, all other things being equal, lean toward the one with more users. Thus, a service's early advantage in user base tends to snowball into greater dominance in the market, an effect scholars call "tipping."[85]

Once a social networking service achieves a sufficiently large user base, users already on the service will be strongly discouraged from switching to another service – those users are, in a sense, locked in.[86] This further burdens those attempting to access a desired audience through an alternative, smaller social networking system. Individuals subject to the statutory

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[84] *See, e.g.*, Kuan-Yu Lin & Hsi-Peng Lu, *Why People Use Social Networking Sites: An Empirical Study Integrating Network Externalities and Motivation Theory*, 27 Computers in Human Behavior 1152, 1158 fig.2 (2011).

[85] Katz & Shapiro, *supra*, at 105-06 (defining tipping as "the tendency of one system to pull away from its rivals in popularity once it has gained an initial edge"); *see also* Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 Cal. L. Rev. 479, 496-97 (1998).

[86] *See United States v. Microsoft Corp.*, 84 F. Supp. 2d 9, 20 (D.D.C. 1999); *see also* Lemley & McGowan, *supra*, at 592.

While users may join multiple social networking services, they generally do not devote equal attention to every service. Network effects mean that, given a limited amount of time to read and post content, a user will tend to allocate time to the services with the largest audiences.

prohibition who wish to network with friends and family who are Facebook users, for example, can do so only if those friends or family join some alternative system. Because network effects heighten the cost of switching to alternative social networks, those friends or family are unlikely to do so.

Restricting subject persons from accessing the most widely used social networking sites substantially decreases the value of their speech. The North Carolina Supreme Court recognized this but thought that the deficiency could be compensated, since the statute permitted access to the recipe-sharing site of a celebrity chef, the Paula Deen Network. *Packingham*, 368 N.C. at 390.

Whether one is attempting to organize a bake sale or a political movement, the Paula Deen Network is not a meaningful alternative to Facebook or Instagram. The economic theory of network effects dictates this, but so does common sense. The tiny corner of the Internet left open by § 14-202.5 bears no comparison to the vast bazaar of ideas and expression on social networks today. The First Amendment does not tolerate governments shunting a class of people off to that tiny corner. The statute should be held unconstitutional.

CONCLUSION

The judgment of the Supreme Court of North Carolina should be reversed.

Respectfully submitted,

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APPENDIX 1

TOP 25 WEBSITES IN THE UNITED STATES[1] (November 18, 2016 – December 18, 2016)

Google

Site Traffic[2] (Rank): 167.81 Million (1)

Site Permits Minors: Yes
(http://bit.ly/1rqpW7W)

Derives Revenue from Operation of Site: Yes
(http://bit.ly/2hRBIHa)

Site Has Social Networking Capabilities[3]: Yes
(https://www.google.com/intl/en/policies/privacy/)
(http://bit.ly/2hp9hza)

YouTube

Site Traffic (Rank): 114.23 Million (2)

Site Permits Minors: Yes
(http://bit.ly/1tZwVVe)

Derives Revenue from Operation of Site: Yes
(http://bit.ly/1wJ1a5M)

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[1] Rankings are from Alexa.com, an internet tracking service for website traffic data. *See, e.g., Mavrix Photo, Inc. v. Brand Techs., Inc.*, 647 F.3d 1218, 1222 (9th Cir. 2011). Alexa site rankings are calculated by combining the average number of daily visitors to a website with the number of pageviews that take place on that site over the course of a month. *See* http://www.alexa.com/topsites.

[2] Reflects estimated unique monthly visitors.

[3] *See supra* Part C.1 (defining minimum level of "social networking capabilities" potentially sufficient to bring web sites within class prohibited by NCGS §14.202-5 to consist of "the ability to exchange information with other users on a website using one's name, nickname, photograph, or other personal information").

Site Has Social Networking Capabilities: Yes (http://bit.ly/1WRwSqw) (http://bit.ly/291dZid)

Facebook

Site Traffic (Rank): 90.28 Million (3)

Site Permits Minors: Yes (https://www.facebook.com/terms)

Derives Revenue from Operation of Site: Yes (https://www.facebook.com/about/basics/facebook-and-advertising/)

Site Has Social Networking Capabilities: Yes (https://www.facebook.com/about/basics/what-others-see-about-you/) (https://www.facebook.com/about/basics/how-others-interact-with-you/)

Amazon

Site Traffic (Rank): 88.70 Million (4)

Site Permits Minors: Yes (http://amzn.to/1Vu2W68)

Derives Revenue from Operation of Site: Yes (http://amzn.to/2hpfn2p)

Site Has Social Networking Capabilities: Yes (http://amzn.to/2fwU3YS) (http://amzn.to/2i5AqT)

Yahoo!

Site Traffic (Rank): 71.75 Million (5)

Site Permits Minors: Yes (https://policies.yahoo.com/us/en/yahoo/terms/utos/)

Derives Revenue from Operation of Site: Yes (https://advertising.yahoo.com/)

Site Has Social Networking Capabilities: Yes
(https://messenger.yahoo.com/)
(http://bit.ly/2hRJzUS)

Wikipedia

Site Traffic (Rank): 70.25 Million (6)

Site Permits Minors: No
(https://wikimediafoundation.org/wiki/Terms_of_Use)

Derives Revenue from Operation of Site: No
(https://wikimediafoundation.org/wiki/FAQ/en)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/25KwyCk)

Reddit

Site Traffic (Rank): 51.28 Million (7)

Site Permits Minors: Yes
(https://www.reddit.com/help/useragreement)

Derives Revenue from Operation of Site: Yes
(https://www.reddit.com/advertising/)

Site Has Social Networking Capabilities: Yes
(https://www.reddit.com/wiki/messaging)

eBay

Site Traffic (Rank): 49.56 Million (8)

Site Permits Minors: No
(http://ebay.to/1dHAoCY)

Derives Revenue from Operation of Site: Yes
(http://pages.ebay.com/help/sell/classified.html)

Site Has Social Networking Capabilities: Yes
(http://pages.ebay.com/help/account/my-ebay.html
#messages)

Twitter

Site Traffic (Rank): 67.44 Million (9)

Site Permits Minors: Yes
(https://twitter.com/tos?lang=en)

Derives Revenue from Operation of Site: Yes
(https://business.twitter.com/en/advertising.html)

Site Has Social Networking Capabilities: Yes
(https://about.twitter.com/directmessages)
(https://support.twitter.com/articles/127871)

LinkedIn

Site Traffic (Rank): 55.53 Million (10)

Site Permits Minors: Yes
(http://bit.ly/P8YEBK)

Derives Revenue from Operation of Site: Yes
(http://bit.ly/2flEWK6)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/2hYddaW)

Netflix

Site Traffic (Rank): 63.59 Million (11)

Site Permits Minors: Yes
(http://nflx.it/1RL0Tnr)

Derives Revenue from Operation of Site: Yes
(http://nflx.it/1RL0Tnr)

Site Has Social Networking Capabilities: No
(https://help.netflix.com/en/node/9977)

Instagram

Site Traffic (Rank): 50.27 Million (12)

Site Permits Minors: Yes
(https://help.instagram.com/478745558852511)

Derives Revenue from Operation of Site: Yes
(https://business.instagram.com/advertising)

Site Has Social Networking Capabilities: Yes
(https://help.instagram.com/684926628219030)

Imgur

Site Traffic (Rank): 37.73 Million (13)

Site Permits Minors: Yes
(http://imgur.com/tos)

Derives Revenue from Operation of Site: Yes
(http://imgur.com/privacy)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/2h06ZW2) (http://bit.ly/2hFFYeD)

Live

Site Traffic (Rank): 38.75 Million (14)

Site Permits Minors: Yes
(http://bit.ly/1KoLjB1)

Derives Revenue from Operation of Site: Yes
(https://privacy.microsoft.com/en-us/privacy statement)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/2hRH2Kr)

Craigslist

Site Traffic (Rank): 36.51 Million (15)

Site Permits Minors: No
(http://bit.ly/2hanMLh)

Derives Revenue from Operation of Site: Yes
(https://www.craigslist.org/about/help/posting_fees)

Site Has Social Networking Capabilities: Yes
(https://www.craigslist.org/about/help/email-relay)

Bing

Site Traffic (Rank): 35.00 Million (16)

Site Permits Minors: Yes
(http://bit.ly/1KoLjB1)

Derives Revenue from Operation of Site: Yes
(https://privacy.microsoft.com/en-us/privacy statement)

Site Has Social Networking Capabilities: Yes
(https://binged.it/2idzikY)

Pinterest

Site Traffic (Rank): 70.60 Million (17)

Site Permits Minors: Yes
(https://about.pinterest.com/en/terms-service)

Derives Revenue from Operation of Site: Yes
(https://about.pinterest.com/en/terms-service)

Site Has Social Networking Capabilities: Yes
(https://about.pinterest.com/en/messages)
(https://help.pinterest.com/en/guide/your-profile)

Tumblr

Site Traffic (Rank): 51.40 Million (18)

Site Permits Minors: Yes
(http://bit.ly/1FJqoBW)

Derives Revenue from Operation of Site: Yes
(https://www.tumblr.com/policy/en/global-advertising)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/2huQ2Ef)

Diply

Site Traffic (Rank): 1.90 Million (19)

Site Permits Minors: Yes
(http://diply.com/static/terms)

Derives Revenue from Operation of Site: Yes
(http://diply.com/static/advertise)

Site Has Social Networking Capabilities: No

Walmart

Site Traffic (Rank): 47.67 Million (20)

Site Permits Minors: Yes
(http://bit.ly/2hpeCGB)

Derives Revenue from Operation of Site: Yes
(http://bit.ly/1I3ggIm)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/2hpeCGB) (http://bit.ly/2h8hcU0)
(http://bit.ly/2hKZJ4m)

ESPN

Site Traffic (Rank): 23.66 Million (21)

Site Permits Minors: Yes
(http://bit.ly/2hY4560)

Derives Revenue from Operation of Site: Yes
(http://espncms.com/advertise-on-espn.html)

Site Has Social Networking Capabilities: Yes.
(https://disneytermsofuse.com/english/#section3)

CNN

Site Traffic (Rank): 46.63 Million (22)

Site Permits Minors: Yes
(http://www.cnn.com/terms)

Derives Revenue from Operation of Site: Yes
(http://www.cnn.com/terms)

Site Has Social Networking Capabilities: Yes
(http://www.cnn.com/terms/comment_policy.html)
(http://cnn.it/2h8d71K)

Office.com

Site Traffic (Rank): 24.91 Million (23)

Site Permits Minors: Yes
(http://bit.ly/1KoLjB1)

Derives Revenue from Operation of Site: Yes
(https://privacy.microsoft.com/en-us/privacy statement)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/1KoLjB1) (http://bit.ly/2hRH2Kr)

MicrosoftOnline

Site Traffic (Rank): 25.61 Million (24)

Site Permits Minors: Yes
(http://bit.ly/1KoLjB1)

Derives Revenue from Operation of Site: Yes
(https://privacy.microsoft.com/en-us/privacy statement)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/1KoLjB1) (http://bit.ly/2hRH2Kr)

PayPal

Site Traffic (Rank): 45.30 Million (25)

Site Permits Minors: No
(http://bit.ly/IGrVjE)

Derives Revenue from Operation of Site: Yes
(http://bit.ly/2hRH3y8)

Site Has Social Networking Capabilities: No

APPENDIX 2

OTHER POPULAR WEB SITES

NYTimes

Site Traffic: 50.22 Million

Site Permits Minors: Yes
(http://nyti.ms/1M2gj8c)

Derives Revenue from Operation of Site: Yes
(http://nyti.ms/2haqGzL)

Site Has Social Networking Capabilities: Yes
(http://nyti.ms/1sBg7S9)

Wordpress

Site Traffic: 49.57 Million

Site Permits Minors: Yes
(https://en.wordpress.com/tos/)

Derives Revenue from Operation of Site: Yes
(https://en.support.wordpress.com/no-ads/)

Site Has Social Networking Capabilities: Yes
(https://wordpress.org/plugins/wp-discussion-board/) (https://wordpress.org/plugins/tags/private-message)

BlogSpot

Site Traffic: 47.54 Million

Site Permits Minors: Yes
(http://bit.ly/2gEzQCJ)

Derives Revenue from Operation of Site: Yes
(https://www.google.com/policies/terms/)

Site Has Social Networking Capabilities: Yes
(https://www.google.com/policies/terms/)

Target

Site Traffic: 42.66 Million

Site Permits Minors: Yes
(http://bit.ly/2hYceYi)

Derives Revenue from Operation of Site: Yes
(http://bit.ly/2hRzHdQ)

Site Has Social Networking Capabilities: Yes
(http://www.target.com/c/terms-conditions/-/N-4sr7l)

Washington Post

Site Traffic: 39.26 Million

Site Permits Minors: Yes
(http://wapo.st/2hpaC8Y)

Derives Revenue from Operation of Site: Yes
(http://wapo.st/2hpaC8Y)

Site Has Social Networking Capabilities: Yes
(http://wapo.st/2idysVm)

Pandora

Site Traffic: 32.69 Million

Site Permits Minors: Yes
(http://pdora.co/2hRBbF1)

Derives Revenue from Operation of Site: Yes
(http://pdora.co/2id2SLD)

Site Has Social Networking Capabilities: Yes
(https://www.pandora.com/privacy)

Fox News

Site Traffic: 29.49 Million

Site Permits Minors: Yes
(http://fxn.ws/2gZXoP6)

Derives Revenue from Operation of Site: Yes
(http://www.foxnews.com/about/privacy-policy/)

Site Has Social Networking Capabilities: Yes
(http://www.foxnews.com/about/privacy-policy/)

Quora

Site Traffic: 25.11 Million

Site Permits Minors: Yes
(http://bit.ly/2hplLXt)

Derives Revenue from Operation of Site: Yes
(https://www.quora.com/about/tos)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/2hFOOsG)

Blogger

Site Traffic: 23.91 Million

Site Permits Minors: Yes
(http://bit.ly/2gEzQCJ)

Derives Revenue from Operation of Site: Yes
(https://www.google.com/policies/terms/)

Site Has Social Networking Capabilities: Yes
(https://www.google.com/policies/terms/)

TripAdvisor

Site Traffic: 23.65 Million

Site Permits Minors: Yes
(http://bit.ly/2hRDNmb)

Derives Revenue from Operation of Site: Yes
(https://www.tripadvisor.com/pages/privacy.html)

Site Has Social Networking Capabilities: Yes
(https://www.tripadvisor.com/pages/privacy.html)

WebMD

Site Traffic: 23.20 Million

Site Permits Minors: Yes
(http://wb.md/2h8gru7)

Derives Revenue from Operation of Site: Yes
(http://wb.md/2h8gru7)

Site Has Social Networking Capabilities: Yes
(http://wb.md/2h8dWHZ)
(http://wb.md/2hSOgQM)

Macy's

Site Traffic: 23.12 Million

Site Permits Minors: Yes
(http://bit.ly/2hp5fac)

Derives Revenue from Operation of Site: Yes
(http://bit.ly/2hp5fac)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/2hXZfWB)

Soundcloud

Site Traffic: 19.11 Million

Site Permits Minors: Yes
(http://bit.ly/2i7ZMbL)

Derives Revenue from Operation of Site: Yes
(https://soundcloud.com/terms-of-use)

Site Has Social Networking Capabilities: Yes
(https://soundcloud.com/terms-of-use)

The Atlantic

Site Traffic: 14.63 Million

Site Permits Minors: Yes
(http://www.theatlantic.com/privacy-policy/)

Derives Revenue from Operation of Site: Yes
(http://theatln.tc/2hpfQ4C)

Site Has Social Networking Capabilities: Yes
(http://www.theatlantic.com/privacy-policy/)

Slate

Site Traffic: 13.78 Million

Site Permits Minors: Yes
(http://slate.me/2hauS2k)

Derives Revenue from Operation of Site: Yes
(http://slate.me/2hauS2k)

Site Has Social Networking Capabilities: Yes
(http://slate.me/1Sgs8JR) (http://slate.me/2i81vxD)

Politico

Site Traffic: 12.91 Million

Site Permits Minors: Yes
(http://politi.co/2hpf2gn)

Derives Revenue from Operation of Site: Yes
(http://www.politico.com/terms-of-service)

Site Has Social Networking Capabilities: Yes
(http://www.politico.com/terms-of-service)

Rolling Stone

Site Traffic: 9.64 Million

Site Permits Minors: No
(http://rol.st/2h0b9gA)

Derives Revenue from Operation of Site: Yes
(http://rol.st/2i7QT1F)

Site Has Social Networking Capabilities: Yes
(http://www.rollingstone.com/services/privacypolicy)

Bleacher Report

Site Traffic: 8.74 Million

Site Permits Minors: Yes
(http://ble.ac/2hpbfj3)

Derives Revenue from Operation of Site: Yes
(http://bleacherreport.com/advertise)

Site Has Social Networking Capabilities: Yes
(http://bleacherreport.com/pages/terms)

Monster

Site Traffic: 7.85 Million

Site Permits Minors: Yes
(http://bit.ly/1rq0cIA)

Derives Revenue from Operation of Site: Yes
(http://inside.monster.com/policy/inside2.aspx)

Site Has Social Networking Capabilities: Yes
(http://inside.monster.com/terms-of-use)

CareerBuilder

Site Traffic: 3.79 Million

Site Permits Minors: Yes
(http://www.careerbuilder.com/terms)

Derives Revenue from Operation of Site: Yes
(http://bit.ly/2hSWpEM)

Site Has Social Networking Capabilities: Yes
(http://bit.ly/2harB30)

AngelList

Site Traffic: 2.41 Million

Site Permits Minors: Yes
(https://angel.co/terms)

Derives Revenue from Operation of Site: Yes
(https://angel.co/terms)

Site Has Social Networking Capabilities: Yes
(https://angel.co/terms)

Raleigh News and Observer

Site Traffic: 1.23 Million

Site Permits Minors: Yes
(http://www.newsobserver.com/customer-service/terms-of-service/)

Derives Revenue from Operation of Site: Yes
(http://www.newsobserver.com/customer-service/terms-of-service/)

Site Has Social Networking Capabilities: Yes
(http://www.newsobserver.com/customer-service/commenting-policy/)